

In the claims:

1. (Currently Amended) A method for determining the concentration of a non-bound iron in a sample of biological fluid, the method comprising:

a) contacting the sample of biological fluid with a surface coated with ~~a polymer-conjugated~~ a polymer-conjugated form of an iron chelator-iron chelator,
~~under conditions suitable for allowing such that said iron chelator chelates~~ the non-bound iron in the sample of biological fluid ~~to be chelated by said polymer-conjugated iron chelator;~~

b) contacting said surface with a complex comprising a marker bound to a metal ion, ~~under conditions such~~such that said iron chelator of said polymer-conjugated form of said iron chelator ~~polymer-conjugated metal chelator~~ chelates said metal ion of said complex to thereby ~~dissociate-release~~ said marker from said metal ion;

c) determining an amount of said marker released from said metal ion ~~dissociated from said metal ion~~, thereby determining the concentration of the non-bound iron in the sample of the biological fluid.-

2. (Previously Presented) A method according to claim 1, wherein the non-bound iron in the sample of biological fluid is non-transferrin bound iron (NTBI).

3. (Previously Presented) A method according to claim 1 or 2, wherein said polymer-conjugated metal chelator is desferrioxamine (DFO).

4. (Previously Presented) A method according to claim 1, wherein said surface is a multiwell plate surface.

5. (Previously Presented) A method according to claim 1, wherein said marker is a fluorescent marker.

6-7. (Cancelled)

8. (Previously Presented) A method according to claim 5, wherein said marker is a calcein.

9-10. (Cancelled)

11. (Withdrawn) A polymer for use in the determination of the concentration of a non-bound metal ion in a sample of serum or other biological fluids, characterized in that it is conjugated to a metal chelator.

12. (Withdrawn) A polymer according to claim 11, wherein the chelator is DFO or a DFO derivative.

13. (Withdrawn) A polymer according to claim 11, wherein the polymer is selected from among polystyrene, polyethylene, polycarbonate, polyester polymers and copolymers, polysaccharides, acrylate-based poly(hydroxamic acid), and polypeptides containing hydroxamate groups.

14. (Withdrawn) A polymer according to claim 12 or 13, which is a DFO or DFO derivative conjugated to a polymer selected from polyacrylate, polyacrylate derivatives, polyacrylate copolymers, arabinogalactan, dextran, pullulan, cellulose and their derivatives.

15. (Withdrawn) A kit for the determination of the concentration of a non-bound metal ion in a sample of serum or other biological fluids, comprising a surface coated with a polymer-conjugated form of a metal chelator.

16. (Withdrawn) A kit according to claim 15, wherein the surface is a multiwell plate.

17. (Withdrawn) A kit according to claim 15 or 16, wherein the surface is coated with a polymer conjugated with DFO or a DFO derivative.

18. (Withdrawn) A kit according to claim 17, wherein the surface is coated with polymeric arabinogalactan-DFO or with hydroxyethyl starch-DFO conjugate.

19. (Withdrawn) A kit according to claim 15, further comprising a marker conjugated with the same metal ion the concentration of which it is desired to determine.

20. (Previously Presented) A method according to claim 1, wherein said non-bound iron in the sample of biological fluid and said metal ion of said complex are of identical type.

21. (Previously Presented) A method according to claim 1, wherein said non-bound iron in the sample of biological fluid and said metal ion of said complex are of different type.

22. (Currently Amended) A method for determining the concentration of a non-bound iron in a sample of biological fluid, the method comprising:

a) contacting the sample of biological fluid with a surface coated with DFO, ~~under conditions suitable for allowing~~ such that the non-bound iron in the sample of biological fluid ~~to be~~ is chelated by said DFO;

b) contacting said surface coated with DFO with ~~calcein~~ calcitonin bound to a metal ion, ~~under conditions such that~~ said DFO chelates said metal ion to thereby ~~dissociate~~ release said ~~calcein~~ calcitonin from said metal ion; and

c) determining an amount of said ~~calcein~~ calcitonin ~~dissociated~~ released from said metal ion, thereby determining the concentration of the non-bound iron in the sample of the biological fluid.